DOCUMENT PRODUCED IN NATIVE FORMAT

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 1 of 29

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 2 of 29

Background

- **Re-baselined Schedule**
  - **Dec 3, 2013 – Consortium first discussed its Re-Baselined Schedule effort**
  - **Jun 23, 2014 – Owners anticipate receiving new schedule around mid-July**
  - **Aug 1, 2014 – Owners receive preliminary schedule info**

- **Aug 11, 2014 - SCE&G issued a Press Release & 10Q disclosure**
  - **Expected substantial completion dates**
    - **Unit 2 … late 2018 first half 2019**
    - **Unit 3 …first half of 2020**
  - **Dates do not reflect all mitigation efforts that may be possible**
  - **New schedule has not been accepted by the Owners**
  - **Consortium (delay) cost estimate anticipated later this month**
  - **SCE&G plans to file revised schedule and cost estimate with PSC by end of year**

- **No new problems exist … project issues are the same**

- **Progress towards resolving these issues has been slow**

Recap of major issues

- **WEC - Engineering Design**
  - **Maturity of the engineering design has had a direct impact on:**
    - **Submodule fabrication**
    - **Nuclear island commodity procurement and construction**
  - **WEC underestimated the work required to adapt the Chinese design to U.S. NRC standards.**

- **Lake Charles - Submodule Fabrication**
  - **CB&I has been very slow to respond to our plea for help**
    - **The Shaw Group was acquired Feb 2013 (18 months ago)**
    - **Included the assimilation of 2 large companies**
    - **Acquisition doubled CB&I head count to 56,000 employees worldwide**
  - **Throughout this process, it has taken a lot of effort to get CB&I's attention**

- **Consortium commercial issues**
  - **WEC / CB&I relationship continues to have friction**
    - **Both companies expect to recover losses from the Owners**
  - **CB&I intends to recover (from WEC) any losses it can't recover from the Owners**

Confidential Treatment Requested by Santee Cooper ORS_00044009

Owners work to affect change

- **Consortium CEOs**
  - **Since Sep 2013 - Owners have engaged Consortium at highest level**
  - **To date, four Consortium CEO meetings have taken place**
    - **2013 – Sep 8 & Dec 17**
    - **2014 – Mar 7 & Aug 7**
  - **Aug 7, 2014 meeting**
    - **Included Toshiba's WEC Board Chair … Kiyoshi Okamura**
      - **Toshiba has engaged the project (see below)**
      - **Seems prepared to ramp-up support as necessary**
    - **CB&I Lake Charles**
      - **CEO Phil Asherman / EVP Luke Scorsone**
        - **Admit CB&I inherited a failed operation**
        - **Seem more confident that issues are now under control**
        - **Have invited Owner CEOs for near term "show & tell" visit**
        - **Asherman now following project weekly via dashboard**

- **Toshiba Engagement**
  - **Engineering Design**
    - **Team of Toshiba engineers dispatched to WEC headquarters Cranberry PA**
      - **Assisting with engineering completion effort**
      - **Assisting with engineering and procurement scheduling activities**
  - **Submodule fabrication and assembly**
    - **Toshiba now assisting Lake Charles with shop fabrication drawings**
    - **Module Assembly Building – one (1) welding specialist (from Keihin Product Operations, Tokyo) will arrive on Sep 8, 2014 to help with oversight of structural module CA01 assembly**
    - **Fabrication shops have been added for Unit 3 submodules**
      - **CA20 – Oregon Iron Works (Portland, OR)**
      - **CA01 - Keihin Product Operations & IHI Corp. (Tokyo)**
      - **CA03 – SMCI (Lakeland, FL)**
  - **Construction Schedule**
    - **Turbine Island Schedule**
      - **Toshiba engineers are assisting with work activity sequencing**
    - **Nuclear Island Schedule**
      - **Toshiba engineers are assisting with design completion and work activity sequencing**

Confidential Treatment Requested by Santee Cooper

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 3 of 29

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 4 of 29

- **Progress Payments**
  - Capped escalation at contract substantial completion dates (Mar 2017, May 2018)
    - Total Consortium impact by project end … $20M (50/50 split CBI/WEC)
      - Assumes an additional 1 year delay
  - $45M has been overpaid thru June 2014
    - July 2014 - Stopped payments on progress payment invoices - $7.2M
      - CB&I - $4.1M not paid
      - WEC – $3.1M not paid
  - Approx. $7M / month … will be withheld from Consortium thru Q1 2015
    - On restart … progress payment schedule will be adjusted to match the (then) new target project completion dates
- **Construction Milestone Payments**
  - Capped escalation at contract substantial completion dates (Mar 2017, May 2018)
    - Total Consortium impact by project end … $100M (80/20 split CBI/WEC)
      - Assumes and additional 1 year delay
  - $2M escalation withheld from July invoices
  - Effort underway to scrub (all) previously paid invoices to recover any escalation dollars potentially overpaid
- **EPC Article 7 – Price Adjustment Provisions**
  - Contract provision being studied by George Wenick (SCE&G outside counsel) … and the NND Business and Finance unit
  - Provision: Agreed upon escalation indices ... vs ... actual inflation realized
    - If escalation indices are found by either Party to <u>not</u> be appropriately tracking inflation or other changes in costs … the Parties shall negotiate in good faith to determine:
      - Substitute indices … or … Equitable adjust. to the Contract Price
    - Potentially affects cost categories
      - Firm + 5.2%
      - Firm + 6.5%
      - Firm + Handy Whitman (negotiated to fixed 5.2% July 2012)
  - Potential Consortium impact varies
    - 1% decrease (all categories) … would reduce project cost $100M
- **Santee Cooper outside construction counsel**
  - Frank Elmore (Elmore Goldsmith, Greenville SC)

Redacted-Privileged

Confidential Treatment Requested by Santee Cooper ORS_00044011

- **Construction Management**
  - **Owners continue to press Consortium to improve the on-site CM team**
  - **Santee Cooper has begun discussions with SCE&G to consider engaging outside assistance with management of the EPC contract.**
    - **SCE&G manages project very conservatively**
      - **Protective of disclosures**
      - **Slow to react to problems**
      - **Not comfortable with confronting the Consortium**

Concerns & Strategy Forward

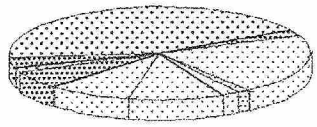
- **Schedule Mitigation**
  - **SCE&G continues to drive Consortium for all mitigation necessary to achieve substantial completion dates within 18 month BLRA contingency (Sep 2018)**
  - **Santee Cooper continues to encourage SCE&G to drive the Consortium for a realistic schedule that the contractor can achieve**
- **Consortium cost estimate at completion**
  - **SCE&G is posturing to negotiate with Consortium**
    - **Plans to file a new schedule and cost estimate with PSC before end of 2014**
  - **Santee Cooper's position … the delays are unexcused.**
    - **Entitlement would first have to be established for a cost claim before the Owners would be in any position to negotiate.**
  - **Two potential paths forward**
    - **Litigation –** Redacted-Privileged
    - **Contract Performance Agreement in exchange for any added cost**
      - **Consortium would have to submit to a new agreement which would include significant financial penalties for any schedule delays moving forward**

Confidential Treatment Requested by Santee Cooper

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 5 of 29

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 6 of 29

Vitale & Associates
• PRODUCTIVITY IMPROVEMENT •



V.C. Summer 2 & 3 Units
Fluor
Vitale & Associates
Productivity Analysis Studies
November 7 – December 18, 2016

Reports - Productivity Studies
Written (1)
Graphics (1)

All recommendations are made to improve productivity of the craft and are derived from the statically valid data we have amassed. Our goal is to supply you with the data, recommendations and comments to assist you in managing your project.

Productivity Measurement – The identical program, category definitions and process was utilized throughout the study. The value added in having a consistent program becomes apparent when making comparisons between previous large construction projects studies we have performed in the USA and overseas by Vitale & Associates.

All Vitale & Associates studies utilize documented time proven Industrial Engineering standards for performing such studies. The amount of observations garnered are sufficient to achieve a confidence level that will ascertain that the data is statistically valid and meets industry standards.

I would suggest reviewing category definitions prior to reviewing study results.

Category Definitions – Pages 18 & 19

Purpose of Study – To supply Westinghouse and Fluor management Team with a detailed assessment of the craft and foremen productivity on the day and night shifts. A detailed comparison is supplied to ascertain craft productivity, foremen performance and opportunities for improvements that might be generic to both shifts.

Confidential Treatment Requested by Santee Cooper ORS_00062683

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 7 of 29

Scope of Study
A detailed data sort is supplied to better assess the craft's productivity by shift, work location, and craft group. The data will assist in determining opportunities for improvement that are generic to craft assigned to both shifts.

A flow chart is supplied for an easy reference of each craft group data and page locations of the histograms and pie charts.

Flow chart / Index – Graphics Page 2

Data – The study consisted of the craft that were assigned to the day and night shifts for three consecutive weeks. The total study number of observations are 54,590 with a confidence level of ± 1.8%

	Observations
Days	36,815
Nights	17,775

Recommendations / Sampling Techs. Comments
All recommendations are derived from the data and are listed in the order of the effect they may have on productivity, which might vary by viewer. The Sampling Technician's comments derived from their observation would be useful in further understanding the recommendations.

Westinghouse Management Team
The willingness of Management to have a third party assess their craft productivity is in itself an indicator of their strengths and commitment to productivity improvement. Others would be satisfied to manage and gauge productivity with a schedule.

I would suggest: "You cannot have productivity improvement without productivity measurement."

The cooperation and professional demeanor of Mr. Churchman, Mr. Macecevic and their entire Team is sincerely appreciated by my Team and myself.

Safety
On all studies we perform we look for any issues that might compromise safety. I would suggest that I am hard pressed to recall such a blatant disregard for construction industry standard safety rules. Although safety was not our charge we could not in a clear conscience turn a blind eye.

Ref. Conclusions / Recommendations – Index Page 5, B, F, G, H, I, J

Workforce Distribution
When reviewing the total study data I would suggest taking into account the portion of the work performed by each work groups that comprise the total study data.

	Days	Nights
Total Study	65.1%	34.9%

Details of each shift's craft groups are supplied.

Graphics – Pies Pgs. 22 & 29

Confidential Treatment Requested by Santee Cooper ORS_00062684

Safety and Productivity Improvements

Periodically Vitale and Associates communicated to Mr. Churchman and Mr. Macecevic the safety and productivity opportunities for improvement. We have listed the numerous obstacles and actions observed by the sampling technicians.

Productivity / Expectations

I would fervently suggest that the true gauge of productivity is the ability of the craft to physically engage in the performance of their work, which is listed as Direct Work. The overall desired level of Direct Work is left solely to the discretion of the Westinghouse Management Team.

Plots

To assist the Management Team in ascertaining the progress that has been made plots of Direct Work, Idle, Travel, Coffee Breaks, Late Start, and Early Quit are supplied. The plots will supply a detailed weekly trend analysis of night shift.

Graphics – Plot Pages 9, 10 & 11

Direct Work - Days 27.1% / Nights 22.8%

Direct Work is an excellent indicator of the effectiveness of planning, scheduling, first line supervision and proper staffing of assignments. I would recommend the present level of Direct Work is significantly below what is achievable and may realistically be expected. I would suggest many of the problems are generic to both shifts and the plots which will verify this. I propose there are numerous factors causing the present situation. I would start with the 'Plan' that allows for the overstaffed and sorely underutilized workforce. The numerous contributing factors are listed in the Conclusion / Recommendations which also supplies the Sampling Techs. actual observations for further insight how our recommendations and comments are derived.

Ref. Conclusions / Recommendations – Index Page 5, A, B, C, S

Graphics – Histograms Pages 3 & 3A - Plots Pg. 9

Idle - Days 22.9% / Nights 25.7%

The 'Idle' time is overly excessive and I would recommend that the primary cause is overstaffing of work assignments which is indicative of a sorely underutilized workforce. The overstaffing of work assignments I attribute to a flawed Plan. The first line supervision and foremen appear to be nonentity in managing the workforce. They demonstrate a lack of 'Active Supervision' and is verified by the crafts disregard of safety work rules, undesirable behaviors and disregard for standard industry work practices.

Ref. Conclusions / Recommendations – Index Page 5 A, B

Graphics – Histograms Pages 4 & 4A - Plots Pg. 9

Confidential Treatment Requested by Santee Cooper ORS_00062685

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 8 of 29

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 9 of 29

Travel - Days 13.4% / Nights 12.1%

The overall 'Travel' time appears to be excessive. I would recommend a portion of the 'Travel' would be reduced with the relocation of break areas, port-o-johns, water jugs and tool cribs. This would also entail placement of additional port-o-johns and water jugs. I would question the necessity of some of the 'Travel' we have recorded. I propose some of it was unwarranted and was noted as 'wandering' and 'Noah's Ark Syndrome' and is readily apparent. The primary causes I would suggest is the overstaffing of assignments and or a lack of 'Active Supervision.'

Ref. Conclusions / Recommendations – Index Page 5 A, B, K, S

Graphics – Histograms Page 5 & 5A Plot Pgs. 10 & 9A

Coffee - Days 8.2% / Nights 6.9%

The coffee break I propose is excessive and the abuses are readily apparent. Craft standing around 'Idle' in anticipation of the breaks was frequently noted and compounded the problem. The foremen were not regularly in their work locations prior to breaks during what I would consider a critical time period for curtailing craft's abuses of the break policy.

Ref. Conclusions / Recommendations – Index Page 5 C, L, R, T

Graphics – Histograms Page 6 & 6A Plot Pg. 10

Late Start - Days 6.4% Nights 4.3%

The Late Start was comprised of the half hour time period after the expected 'start work' time and after the lunch break. An extremely slow start was noted at the work locations after the lunch break with a great many craft engaging in social conversation and lounging about. It appeared that the craft were having an hour for the lunch break, with a 'blind eye' to the fact. The foremen were sparsely observed at the work locations in this critical time period and apparently not demonstrating 'Active Supervision'.

Ref. Conclusions / Recommendations – Index Page 5 B, N, T

Graphics – Histograms Page 7 & 7A Plot Pg. 11

Early Quit – Days 5.7% Nights 6.5%

The Early Quit was comprised of the half hour time period prior to lunch and a half hour prior to the 'tools down' at the end of the shift. I suggest reconfirming expectations of their craft's 'tools downs' prior to lunch and the end of shift. The foremen must also be physically and routinely at the work areas during these critical time periods to ascertain the policy is being adhered to. I would further suggest the foremen must be demonstrating 'Active Supervision' to curtail the abuse we have observed. I would suggest the 'Early Quit' undesirable behaviors are deeply rooted and will not change without a consorted effort and accountability of the foremen in their work areas.

Ref. Conclusions / Recommendations – Index Page 5 B, O, T

Graphics – Histograms Page 6 & 8A Plot Pg. 11

Confidential Treatment Requested by Santee Cooper ORS_00062686

Conclusions / Recommendations – Index

A - Staffing Levels (Pg. 6)
B - Foremen (Pg. 8)
C - Shift Schedule / Breaks (Pg.6)
D - 12-Hour Schedule (Pg. 7)
E - Data (Pg.8)
F - Cell Phone (Pg.9)
G - Safety Watches (Pg.9)
H - Safety - PPE (Pg. 10)
I - Fitness for Duty (Pg.10)
J - Horseplay (Pg.11)
K - Undesirable Behaviors (Pg.11)
L - Coffee Breaks / Foremen (Pg.14)
M- Travel / Wandering (Pg.12)
N - Late Start (Pg.12)
O - Early Quit (Pg.13)
P - Productivity Improvement / Contractor (Pg.13)
Q - Productivity Expectations (Pg.13)
R - Break Areas (Pg.14)
S - Site Layout (Pg. 15)
T- Break Horns (Pg.16)
U - Weather Conditions (Pg.16)
V - Continuous Improvement (Pg.16)
W - Hardhat Markings (Pg.16)
X - Re-study (Pg.17)
Y - Productivity Walk Downs (Pg.17)
Z - Fab. Shops / Laydowns (Pg. 17)

Confidential Treatment Requested by Santee Cooper

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 10 of 29

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 11 of 29

Staffing Levels

Obstacle - The excessive 'Idle' time we have recorded is an excellent indicator that is synonymous with job overstaffing. Which will:

Beget more non-productive craft

Set behaviors that will be difficult to reverse

The overly excessive 'Travel' time further suggest overstaffing 'Aimless Wandering'.

Observations / Comments – Sampling Techs.

- Followed a laborer around the site for about 20 minutes before he "slowly made his way to every break area, only to hang around with nothing to do.
- (Pacing the work) craft moving at a very relaxed pace during the night but towards the end of the shift, they "seemed to pick up the pace" to get things done?
- Observed RB sleeping in warm-up tent.
- Observed laborer snuggled inside of plastic covering tank who appeared to be sleeping.
- Group of 4 RB having long intense idle conversation, laughing loudly and joking.
- Observed group of 4 RB idle in warming tent all night long.
- Lots of craft standing in groups idle throughout the night.

Recommendation - I would ardently recommend reviewing the present staffing requirements for the available scope of work. Furthermore, one must realize the work will not expand to the size of the workforce.

Shift Schedules / Breaks

Ten Hour Shift

During the study we observed the ten hour shift beaks being implemented with a two break schedule but we found that it was not being managed successfully. Observations also recorded a lion share of the craft utilizing a third break during the shift as well, even though there was no sanctioned break scheduled.

Observations / Comments – Sampling Techs.

- Elevated coffee observations due to craft not following break schedule and/or idle in anticipation.
- Craft taking a break one hour after scheduled lunch time.
- Breaks seem to be taken sporadically, despite a set schedule for most.
- Still observing consistent presence in the break rooms at the vending machines, sometimes with foreman present.

Recommendation – On other projects we successfully implemented the ten-hour shift break which is comprised of a half morning break, a half hour afternoon break and alleviating the customary lunch. The paramount importance of this is it will reduce the breaking of the work flow from three times per shift to only two times and will also reduce the fatigue factor of the craft. I would suggest reviewing the feasibility of the implementation of a new ten-hour shift schedule.

Confidential Treatment Requested by Santee Cooper ORS_00062688

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 12 of 29

12-Hour Shift Schedule

Historically, working a 12-hour shift compounds issues with regard to productivity, fatigue, safety, schedule, and cost, when implemented over the course of a project of this magnitude. We would recommend utilizing a 12-hour schedule sparingly. Before implementing, the aforementioned issues must be a determining factor.

Productivity

- Increase in break time occurs because of the extended schedule and breaks the flow of work.
- Increased IDLE time as the fatigue factor sets in.

Fatigue

- Safety issues will compound as the fatigue factor reduces attention to job functions and puts unnecessary risk factors in an already hazardous and complex work environment.
- Reduction in leisure time also increases stress levels, compounds behavioral issues, creates inattention to work and environment, and increases morale and attendance issues.
- Fatigue is a big factor when implementing a 12-hour shift and over a period of time, personnel begin to feel the effects of the lengthened work schedule which further reduces their performance.

Schedule

- Fatigue creates other issues such as fitness for duty from lack of sleep, reduced time to take care of personal business, and minimizes time spent with families from the additional burden.
- Some drawbacks include logistic issues for large heavy lifts which are now performed during peak work time and interrupts the flow of work for safety reasons.
- Radiography is another function normally completed during breaks between shifts, now is conducted during an active shift which again, interrupts the flow of work.
- The 12-hour shift also extends the weekly schedule and complicates compliance to the 72 Hour Rule.

Cost

- With the end result not making a significant impact on planned schedule with the resources being expended, the additional hours to accommodate a 12-hour shift increases cost for man hours and creates more financial burden on resources to achieve the goal of completion.
- It also keeps key equipment in operation for extended periods of time which increases costs to maintain.

Confidential Treatment Requested by Santee Cooper ORS_00062689

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 13 of 29

Foreman

Obstacle – Numerous observations made in the field indicate that some of the foremen and supervision are part of the problem given their undesirable behaviors. The foremen demonstrated negative examples to their craft that creates an ill-fated result hindering a productive workforce.

Observations / Comments – Sampling Techs.

- Laborers observed idle engaged in conversations with multiple craft on site. Foreman presence lacking a majority of the shift.
- Observations of electrical foreman standing around with (6) craft engaged in socializing and cell phone use.
- Foremen observed not wearing PPE with their craft not wearing PPE.
- Foremen observed gathering in groups for idle conversation.
- Consistently observed craft and supervision inside tents with the heat on, playing on their cell phones and socializing.
- Carpenter foreman entered a red tapped area and was instantly confronted by an Ironworker about not being allowed entry. The foreman proceeded walking threw the area cursing.
- Craft are taking the non-scheduled coffee break. Foremen are joining in and or turning a blind eye to it.

Recommendation - The foremen must be made aware that they are of paramount importance to garnering a safe and productive workforce. They must lead by example and be held accountable for the actions or inactions of those assigned to them. The foremen must direct their crews demonstrating

'Active Supervision' which appears to be sorely lacking. I define 'Active Supervision' as not merely a foremen's presence in the field, but taking an energetic role in directing those assigned to them into a productive mode. Foremen must be made aware that they will be held accountable for their craft's adherence to all safety rules and productivity expectations.

I would recommend an 'open door' policy and periodic communication with frontline supervision on obstacles hindering productivity. Giving them an active role in improvements will help them direct the changes and assist in removing the 'us and them' mentality.

Data

Using the data will further expand expectations of productivity and the performance of those

assigned to directing the workforce. Bearing in mind that although we observe and gather data on the craft, the results of the study is in essence a measurement of the effectiveness of Management. I recommend sharing the data with all of the Project Management Team and Foremen.

I suggest,

> "If employees do not effectively express their recognition of performance....
> Regardless of whether the expression conveys positive or negative assessments ...
> Then employees are not likely to be motivated to perform optimally"

Confidential Treatment Requested by Santee Cooper ORS_00062690

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 14 of 29

Cell phones

Obstacle – The use of cell phones were frequently observed at the work locations which is ultimately a safety issue but also a disruption to the work flow and is a hindrance to garnering a productive workforce. In the complex environment of a major nuclear construction project the use of cell phones is unacceptable.
Observations / Comments – Sampling Techs.

- Observed an Ironworker walk into a pole because he was busy texting on his phone.
- Craft and foremen driving vehicles still operating cell phones and radios while driving and not paying attention to their surroundings.
- Iron workers on top the unit playing on their cell phones.
- Still observing cell phone use site wide with craft having social conversations, texting, and playing games during work hours on the job site.
- Cell phone use throughout the turbine even when supervision is present.
- Pipe fitter was on safety watch and playing on his cell phone.
- Foremen observed often on cell phones sharing videos with other foremen and craft being part of the problem and not the solution.

Recommendation - I would ardently suggest prohibiting the carrying of cell phones into work areas. I would further suggest implementing clearly defined expectations of utilization on site be communicated to all and actively monitored. Policies with penalties for noncompliance should be included in the 'Project Work Rules and Rules of Conduct VC Summer 2 & 3' handbook

Safety Watches

Obstacle - When taking into account the safety watches 'undesirable' behaviors observed in the field with regard to fire watches and hole watches we would have to question their qualifications and training. I would suggest the oversight of safety personnel, foremen, and management regarding these behaviors are lacking.
Observations / Comments – Sampling Techs.

- Fire watches are inattentive to their duties.
- Observed fire watch engaged in social conversation with electricians while an ironworker was up in a JLG welding. Craft coming through were waiting for confirmation to pass through.
- Observed fire watch sitting in designated warm up tent on base level playing on phone. (TI2)

Recommendation - I would recommend a more intense selection process, additional training, and clarification of their duties to address these issues. It is of paramount importance to the safety of the craft that they perform their duties with every attention to detail to ensure a safe work environment.

Confidential Treatment Requested by Santee Cooper ORS_00062691

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 15 of 29

Safety – PPE

Obstacle – The non-compliance of safety policies were observed routinely during the study suggesting that either the policy is not being enforced, or the message isn't being conveyed. Either way, the lack of care in wearing the necessary PPE on site is troublesome at best. Considering all the hazards associated with a major nuclear construction site, PPE should be of first and foremost priority so everyone may perform their duties safely.
Observations / Comments – Sampling Techs.

- Safety Glasses are still a huge issue on this shift to the point where more craft are observed without safety glasses than with them!
- One night I commenced to counting how many craft coming in or out that didn't have safety glasses on and I stopped counting when I reached 277. This involves night shift leaving and day shift coming in. It's a problem site wide.
- Observed craft setting down in the North Aux. not wearing PPE at all. Labor Foreman walked by them and didn't say a word.
- Multiple observations of safety personnel in idle conversations with foremen and general foremen. (if they're not paying attention to the site, then safety isn't number #1)
- Lack of PPE observed by all personnel including Safety.
- Safety personnel still seem "timid" with their responsibilities. Idle conversations with nearly everyone on site it seems.
- Foremen observed not wearing PPE with their craft not wearing PPE.
- Still there is no hearing protection station around vacuum trucks, craft are walking right up next to them without earplugs.

Recommendation - I would recommend reassessing the policies and procedures set forth and reinforce strict guidelines and communicate consequences for non-compliance.

Fitness-For-Duty

Obstacle - I would have to question the FFD of the individuals that have been observed on numerous occasions sleeping and the actions or inactions taken to address this alarming issue. I would suggest this is a FFD issue and should be treated as such.
Observations/Comments- Sampling Techs.

- I observed scaffold craft sleeping while foreman walked past him. (Containment)
- Observed laborer snuggled inside of plastic covering tank who appeared to be sleeping.
- Observed RB sleeping in warm-up tent.
- Craft sleeping behind the hanging tarps. TI2

Recommendation – "FFD means that an individual is in a physical, mental, and emotional state which enables the employee to perform the essential tasks of his or her work assignment in a manner which does NOT threaten the safety or health of oneself, co-workers, property, or the public at large."

NRC, 10 CFR Part 26

Supervision needs to take a more 'active' role in assuring that everyone arrives to work is 'fit for duty' and takes actions for those who are not. Communicating Policies and Procedures as stated in the 'Project Work Rules and Rules of Conduct VC Summer 2 & 3' handbook is only the first step. They must also communicate that proper lifestyle choices should be made to assure they arrive on site 'ready to perform their duties'.

Confidential Treatment Requested by Santee Cooper ORS_00062692

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 16 of 29

Horse Play

Obstacle - We observed craft and foremen engaging in 'horse play' in and around work areas on both shifts. I would suggest this type of behavior in the complex environment of a nuclear construction project is unacceptable and an accident waiting to happen. On occasion, it was noted that foremen were present and did nothing to intervene. I suggest the crafts actions indicate excessive 'Idle' time with the root causes being overstaffing and a lack of foremen's 'Active Supervision.'

Observations/Comments- Sampling Techs:

- RB foreman not wearing PPE and engaged in horse play with his crew.
- Pipefitter using scaffold to do pull ups on.
- Observed 3 rod busters doing pull ups on the scaffolding.
- Pipe fitter hanging from the bottom of an active JLG.
- Observed an IW performing a balancing act for his friends. He was walking a beam on the ground while balancing a hammer on his head with the foreman present.

Recommendation - I would recommend removal of the offending parties. I would further question the foremen's involvement and inaction on what is an obvious safety issue. Furthermore, review of staffing levels is also recommended.

Undesirable Craft Behaviors

Obstacle - On numerous jobs we observed the foremen were not demonstrating 'Active Supervision' resulting in craft actions or inactions that contributed to the significantly lower 'Direct Work' and safety issues.

Observations / Comments – Sampling Techs.

- Craft sleeping in the work area and in the break room during work hours.
- Horseplay between craft and foremen.
- Gathering in groups engaged in social conversation.
- Idle at work locations in anticipation of break, lunch and quitting time.
- Aimless wandering around site.
- Foremen are gathering together for idle conversations.
- Multiple observations of craft standing or sitting idle while 2-3 do the work, sometimes with Foreman present.
- Some craft observed packing up and leaving the work areas approx. a half hour before the tools down time.
- There seems to be a complete breakdown of supervision on nights for most groups, foremen engage in socializing and seem to be more worried about craft approval than keeping them working.
- Observed 2 foreman sharing pictures on their cell phone while standing in the traffic pathway. (Setting the example?!)

Recommendation – The data and observations indicates a breakdown of management of the workforce first line supervision and management. I would strongly recommend replacing foremen whose craft consistently demonstrate these undesirable behaviors. Fluor needs to communicate expectations, consequences and oversight in to change this culture, a productive workforce starts and ends with Strong Leadership.

Confidential Treatment Requested by Santee Cooper ORS_00062693

Travel / Wandering

Obstacle - The 'Travel' was overly excessive throughout the study. There appeared to be a great deal of craft 'wandering' as well as socializing. I would suggest this was readily apparent and is indicative to overstaffing of assignments and also a lack of 'Active Supervision.' I define 'Active Supervision' as not merely a Foremen's presence in the field, but also taking a vigorous role in directing those assigned to them into a productive mode. Multiple observations of craft wandering and socializing were recorded sometimes with supervision present.

Observations / Comments – Sampling Techs.

- Numerous craft observed aimlessly wandering around the site stopping and socializing with whomever will listen.
- Followed a laborer around the site for about 20 minutes before he "slowly made his way to every break area, only to hang around with nothing to do.
- Aimless wandering through lower elevations where no work is being performed. (Aux)

Recommendation – Observations made during the study suggest that frontline supervision needs to be held accountable for the actions of their craft. Reassessment of the expectations needs to be communicated and supervision needs to take a more proactive approach in directing those assigned to them to garner a more productive workforce.

Late Start

Obstacle - An extremely slow start was noted in the first hour after the start of the shift and directly after lunch. I would suggest that these abuses were readily apparent and there appeared to be no efforts to curtail them. The Late Start is primarily comprised of the half hour time period directly after the lunch break. The start of the day Late Start time period was mostly covered by the 'Job Safety Briefing' listed as JSB in the data sort.

Observations / Comments – Sampling Techs.

- Numerous observations of craft smoking, eating and engaging in social conversations 45 minutes after the start of shift.
- Lunch break abuse is readily apparent, craft returning 15-20 min after break.

Recommendation - I would recommend foremen 'Active Supervision' during these critical time periods are paramount to resolving this issue.

Confidential Treatment Requested by Santee Cooper ORS_00062694

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 17 of 29

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 18 of 29

Early Quit

Obstacle – Multiple observations were noted in the field with craft and foremen socializing and staged at the turnstiles well before the expected 'tools down' time.
Observations / Comments – Sampling Techs.

- EQ seems evident with observations of craft standing idle engaged in social conversation 20-25 minutes before Tools down time.
- High idle in anticipation of lunch break, 30-35 minutes.
- End of the day, craft have been told not to leave their work areas so they are standing around 30-40 min before the end of shift.

Recommendation - I suggest reconfirming with Fluor their expectations of their craft's times to put 'tools down' prior to lunch and at the end of shift. It is of paramount importance that Westinghouse and Fluor be unified on this issue. Managers from Westinghouse and Fluor must also routinely be physically in the work areas during these critical time periods to ensure policy adherence. I would further suggest charging the Foremen with communicating the daily status of Early Quit in their area of responsibility. The 'Early Quit' undesirable behaviors are deeply rooted and will not change without this type of a concerted effort.

Productivity Improvement - Contractors

I would suggest reviewing with contractor the final report in its entirety. After all their questions
are answered I would recommend that Fluor be requested to submit a plan on how they will improve the performance, the direction of the craft and their productivity. I would suggest their recommendation should be made by those directing the workforce and be data driven, or one might receive the easy textbook fixes, i.e. small hand tools, new forklift, etc.
I realize that this might be a bit difficult and would suggest it is certainly worth the effort.
I would further advocate:

"If they do not effectively express their recognition of performance,
Regardless of whether the expression conveys positive or negative assessments,
Then they are not likely to be motivated to perform optimally"

Productivity / Expectations

I would suggest that the true gauge of productivity is the ability of the craft to physically engage in the performance of their work, which is listed as Direct Work. The overall desired level of Direct Work is left solely to the discretion of the Project Management
Team. Upon request Vitale & Associates will supply benchmark data on other similar studies that we have performed at nuclear plants.

Confidential Treatment Requested by Santee Cooper ORS_00062695

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 19 of 29

Break Areas

Obstacle – The observations of craft traveling 15-20 minutes early to the break areas suggests there is a need to reevaluate the placement of break areas to reduce their 'Travel' time and fatigue.

Observations / Comments – Sampling Techs.

- Observed LS after lunch with craft and foremen wandering out of their break areas 20 minutes after the start of break.
- Break tent for NI2 appears quite a distance away from the work area, craft observed traveling back 10-15 minutes after end of break. (Additional travel time)
- Craft are leaving the work area 20 minutes before the start of coffee.

Recommendation – I would recommend installing break shanties in some of the work areas where space is available to reduce excessive 'Travel' time i.e. NI2 Containment. Mandate use of break shanties already located in work areas. Install clocks in the break rooms and add additional refrigerators and microwaves to accommodate staffing levels. We have on numerous projects supplied detailed plans on suggested locations of break shacks, port-o-johns, tool cribs, and water jugs etc.

Coffee Breaks – Foremen

Obstacle – The 'Idle' in anticipation of the coffee breaks as well as 'Travel' away from the work areas suggests a lack of active supervision in monitoring the coffee breaks.

Observations / Comments – Sampling Techs.

- Craft seem to take break whenever they please with observations of some craft eating and/or drinking during the whole shift.
- Observations recorded individual foremen shacks being utilized as break areas for some of the craft. These shacks are a hindrance and create an unnecessary road block in the supervision of the craft during critical time periods.

Recommendation – I would suggest the Foremen be mandated to break with their craft in their designated areas and be held accountable for any abuses of the break policy including craft 'Idle' in anticipation of the breaks. "Active Supervision" in managing guidelines will further ensure adherence to the break policies. Clearly defined expectations must be communicated to the foremen, including penalties for non-compliance.

Confidential Treatment Requested by Santee Cooper ORS_00062696

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 20 of 29

Site layout
Break areas –

Obstacle - Craft having to walk excessively to and from their areas of work to use break tents is time consuming and definitely attributes to the elevated 'Travel' time. Several other factors should be considered, such as craft fatigue and loss of control of individuals once they leave their immediate work area, such as engaging in social conversation and 'Idle' time.
Recommendation - Placing break areas directly in the work locations will reduce the need for travel. Removing the no food or drink policy in general work areas will also have a positive impact. Craft will be more likely to sit down in their areas than wander greater distances for break.

Tool rooms –
Obstacle – Multiple observations of craft standing in lines at tool cribs and rod rooms at the start and end of shift suggests reassessment of placement and set-up of materials craft need to perform their work.

Recommendation – Properly supplied job boxes will remove the necessity of multiple tool cribs. When properly placed and stocked these boxes will help in reducing the time craft are away from their work area. This will also help reduce the early quit time as craft will be able to lock up tools and not travel to a tool crib to return them.

Foremen work stations –
Obstacle - It appears each foreman has his own office, small break area, and supply set up. The location of these areas and the foremen are not conducive to garnering a productive workforce.

Recommendation - I would recommend relocating these areas and setting up foreman stations in their work areas. Keeping the foremen in the work area, especially during the critical times, is of paramount importance to garnering a productive workforce. The current set up promotes the 'us and them' mentality as each group has their own area.

Port-o-johns –
Obstacle - The urination in the field without the use port-o-johns appeared to be a common practice. Craft having to walk to and from their areas of work to use facilities is time consuming and definitely attributed to the elevated 'Travel' time. There are several other factors that should be considered, such as craft fatigue, loss of control of individuals, increased socializing and elevated 'Idle' time.

Recommendation – I would ardently suggest that further planning is required in the strategic placement of Port-o-johns in and around the nuclear islands, turbine islands, and the fabrication areas. I would recommend that the plan must be 'dynamic' and ongoing with the changing scope of work, work locations and the size of the workforce. A loss of productivity due to the obstacle of having to walk further then necessary must be the prevailing mindset.

Confidential Treatment Requested by Santee Cooper ORS_00062697

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 21 of 29

Break Horns

Obstacle – Craft as well as foremen were routinely observed 'Idle in anticipation' of breaks as well as clock watching. Sometimes foremen were observed verbalizing this which caused elevated abuse.
Observations / Comments – Sampling Techs.

- Idle in anticipation routinely observed with craft socializing 10-15 minutes before breaks, sometimes with foremen engaged as well.
- Clock watching was also observed and foremen were verbalizing "almost time for break" 10-15 minutes before break time.
- Multiple observations of craft already in break rooms eating and drinking at least 10 minutes before scheduled break.
- Observed foreman asking his crew what time they want to take lunch. Thought there was a schedule?

Recommendation - I appreciate the mindset of those involved in the construction industry on break horns and would suggest that change is long overdue and warranted. I would recommend using break horns to signal the start and end of coffee breaks, lunch and the end of shift 'tools down.' Horns already on site need to be synchronized with proper break times and start/stop times. Management and frontline supervision need to adopt this process to increase productivity. When properly monitored and managed we observed improved productivity with the use of break horns on projects with comparable staffing levels.

Weather Conditions

The weather was somewhat a factor that contributed somewhat to the lower levels of productivity.

Continuous Improvement

I would suggest embracing a continuous improvement mentality utilizing the base line data we have amassed.

Hardhat Markings

Obstacle – Effective leadership is difficult when identification of personnel cannot be easily established and is of paramount importance when taking into account 'Idle' and 'Travel' time. The use of highly visible hardhat markings will allow one to easily identify specific craft, foreman, general foreman and superintendence's from a distance away.
Observations / Comments – Sampling Techs.

- Consistent observations of craft hanging out in the basement of the north aux.
- Observed 2 craft sitting in N. AUX, both with cell phones in hand.
- Continued observations of aimless wandering.

Recommendation – Continue mandatory hardhat markings throughout the site and require compliance to identify all personnel and their roles. Note: It was disappointing to be informed that after the initial study was conducted, there was a request to remove the striping now that the study was complete. Where is the mindset of accountability and productivity?

Confidential Treatment Requested by Santee Cooper ORS_00062698

Re-Study

I would suggest that after the productivity improvements have been implemented and expectations have been set, an additional study should be performed in a timely manner to measure the effectiveness of the changes.

Productivity Walk Downs

I would suggest performing weekly walk downs with Fluor and Westinghouse management representatives to ascertain any productivity obstacles and noncompliance of standard industry work practices. I would recommend a plan to delegate findings to appropriate groups to remedy any issues that are discovered.

Fabrication Shops / Lay down Areas

Our previous experiences in and around fabrication shops and lay down is a must to include in future studies to help assess needs for improvement in these areas.

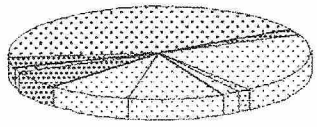
Confidential Treatment Requested by Santee Cooper ORS_00062699

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 22 of 29

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 23 of 29

Vitale & Associates

• PRODUCTIVITY IMPROVEMENT •



WORK SAMPLING CATEGORY DEFINITIONS

PRODUCTIVE

DIRECT WORK – Exerting physical effort directed towards an activity, or physically assisting in these activities.

SAFETY AND SECURITY - Activities or efforts related to functions of fire watches, confined space attendant, and FME attendants.

RECEIVING INSTRUCTIONS – Conversations between mechanics, when it is apparent that it pertains to the job; i.e. reviewing blueprints, direct instruction, or reviewing task. Includes talking on the PA system or job related phone conversation.

RECEIVING INSTRUCTIONS (Foreman) – Job related conversation between a supervisor / foreman and a mechanic.

RECEIVING INSTRUCTION (Toolbox) – Attending daily toolbox meeting.

TOOLS & MATERIALS – Retrieving tools from a toolbox, changing a grinding wheel, changing dies on a pipe threader, etc.

TRANSPORT – Carrying / transporting of tools, equipment, and material to and from work site. Waiting or transacting at a storeroom / tool crib windows.

TRANSPORT (Tool Crib) - Waiting or transacting at a storeroom / tool crib windows.

WORK WAIT – Waiting for blocking tags, crane load being lowered, QC hold, or other work stoppages.

Confidential Treatment Requested by Santee Cooper ORS_00062700

NONPRODUCTIVE

IDLE (site) – Idle worker, can be engaged in social conversation, smoking, drinking soda or coffee, making a personal phone call, etc.

IDLE (coffee) – Worker having a coffee break.

LATE START – Half hour time period after start of shift and meal break, comprised of the following categories: travel, and idle.

EARLY QUIT – Half hour time period before meal break, and end of shift, comprised of the following categories: travel, and idle.

PERSONAL – Use of toilet facilities, washing hands, donning and doffing of safety gear, putting on gloves, changing clothes, and drinking water. Any activity related to the personal well-being of the individual.

TRAVEL – Walking empty handed, including to and from the job site, on the job site, and includes operating or riding in a motor vehicle.

TRAVEL / ELEVATOR – Waiting or riding on elevator or manlift empty handed.

Charles A. Vitale
Principal Consultant
732-679-1833
732-496-5638 (Cell)
732-679-3309 (Fax)
Productiveminds@aol.com

Confidential Treatment Requested by Santee Cooper ORS_00062701

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 24 of 29

santee cooper

INTER-OFFICE COMMUNICATION

Date: October 21, 2013

To: James E. Brogdon, Executive Vice President and General Counsel
Steve Pelcher, Deputy General Counsel, Nuclear and Regulatory Compliance

From: Lonnie N. Carter, President and Chief Executive Officer

Subject: Consortium Meeting regarding Summer Units 2 and 3 on September 18, 2013

Kevin Marsh and I met with Consortium CEO's to discuss the schedule of module and submodule completion for Summer Units 2 and 3. Santee Cooper and SCANA requested the meeting three weeks earlier to express concern regarding the late delivery at the point of the meeting of 15 submodules from Lake Charles. Attending the meeting for SCANA was Kevin Marsh, Chairman and CEO. I represented Santee Cooper. Representing Toshiba was Chairman Shigenori Shiga. Representing Westinghouse was Danny Roderick, President and CEO, Mark Morant and another gentleman, who was not identified until later in the meeting. He was there not as part of our meeting but another meeting they were traveling to after ours. Representing CB&I were President and CEO, Phil Asherman, Executive Vice President, Luke Sorenson, Lasa (not familiar with his first name), COO, and Jeff Lyash.

Kevin Marsh started the meeting by expressing our concern that CB&I was failing to deliver submodules to the site as provided in their April 9, 2013 schedule. He reminded them that Santee Cooper and SCANA had agreed to wait until CB&I was able to evaluate the circumstances at Lake Charles before providing the schedule following their acquisition of Shaw. That schedule was provided on April 9th and was the basis for the request by SCANA and Santee Cooper to provide a revised overall project schedule. That revised schedule provided for Summer Unit 2 to come on line between December 2017 and March 2018. Summer Unit 3 would follow approximately 12 to 15 months later. SCANA announced the revised schedule at its Analyst Day presentation on June 5, 2013 and Santee Cooper also began using the revised schedule in its discussions with investors and in its official statement for bond offerings. As of the date of our meeting, CB&I and the Consortium has failed to deliver 15 submodules. These submodules are critical for the completion of module CA20. According to the June 2013 schedule, module CA20 must be set by the end of October 2013 in order to remain on the current schedule.

Both Kevin and I explained our grave concern regarding the inability of CB&I and Lake Charles to deliver submodules as scheduled. We pointed out that Santee Cooper and SCANA had been working with Shaw and now CB&I for almost three years in order to make sure that the submodules could be delivered timely. During that time, at a series of meetings Shaw/CB&I gave us plans and assurance that they would take the necessary steps to deliver modules in a timely manner. Their failure to provide modules on a timely manner is now having a critical impact on the project and if not addressed immediately could mean that our organizations would be forced to take drastic action. Kevin and I went on to note that we have received so many new schedules that they are meaningless. We have no real confidence in their ability to provide modules as scheduled. We have reminded them that we have given CB&I additional time after their acquisition of Shaw to determine an accurate schedule for delivering modules. Now this

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 25 of 29

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 26 of 29

information has been provided to analysts and potential investors. The Consortium's commitment to addressing the issues has very low credibility with our organizations. Our expectation is that the Consortium, CB&I, and Westinghouse, will correct these problems in a timely fashion so that they can get the project back on schedule and meet the December 2017 substantial completion date. We made clear that this was our expectation that the June 2013 project schedule would be met and the Consortium would use whatever resource necessary to meet such schedule. We reminded them that we had not agreed to the delay that brought us to this schedule nor would we be willing to provide any additional compensation. Kevin reminded them that the July 11, 2012 change order provided additional compensation for module design and fabrication issues but fixed the cost of such modules to the project, meaning that CB&I had assumed the liability for any and all future costs associated with module fabrication including delays. We further explained that this project receives very close scrutiny from the financial community, regulators, and our customers. There is a very close watch on schedule, budget, and cost overruns. The recently announced delay in June exacerbates these concerns. Any lack of module deliveries in August and September is unacceptable coming just weeks after receiving a revised project schedule. Our expectation is that the Consortium will correct these problems and get the project back on schedule.

I pointed out that Santee Cooper is in the process of preparing to enter the financial market to issue some additional long term debt with longer maturities. Santee Cooper must be prepared to explain the schedule and would have to disclose any items or any matter or issue which was potentially having a material delay on the project schedule. Kevin indicated that SCANA would likely be in the market in October as well. I requested that the Consortium provide Santee Cooper and SCANA a letter setting forth their view of where they were on the schedule.

Both Kevin and I pointed out that failure to deliver the modules on schedule would be received poorly by the financial community and regulators. The regulators likely would not approve further delays or costs increases and the financial community would not likely lend additional money at competitive interest rates. Therefore, it is imperative that the Consortium stick to the schedule and budget for the project. I believe judging from the reactions of Phil Asherman and Danny Roderick that they were not aware of how closely monitored the schedule and cost are and how those could potentially lead to the cancelation of the project.

Luke Sorenson spoke up and indicated that they believed that the project was on schedule. CB&I recognized some of its issues regarding the manufacturer and fabrication of modules at Lake Charles. He indicated that all of the submodules for CA20 would be received at site ready for assembly by October 25th. He further indicated that in the next six weeks, 14 key modules would be delivered to the site and ready for use, 8 modules would be fixed at the site; these are the so called Legacy modules from Lake Charles, 6 modules would come from Lake Charles. The October 25 delivery date should allow for CA20 to have a "hook date" of January 14th. Jeff Lyash spoke up and indicated that they still believe that the December 2017 substantial completion date is achievable. The Consortium, in particular, CB&I are on course and taking actions to make this schedule.

The group of Consortium representatives began to explain themselves, they indicated that they recognized when they provided the revised schedule for modules on April 9, 2013 that additional manufacturing capability was necessary to meet the schedule. CB&I has been in the process of identifying additional manufacturing capacity. They indicated they had qualified five potential suppliers and were negotiating with one of these third parties to provide additional manufacturing and fabrication. All of these suppliers are currently nuclear qualified. It was unclear to me as to whether all of the suppliers were domestic although several clearly were. In addition to this additional help, they have engaged Electric Boat. Although, my understanding is Electric Boat is not doing certified nuclear work.

Luke Sorenson indicated that as they begin to work on CA01 submodules, one of those modules takes up almost the entire Lake Charles facility. This was cited as the reason for needing to ship the so called Legacy modules still requiring some additional minor work or paperwork associated with them prior to their being able to be turned over to the site for inclusion. Minor work was indicated as very small welding or grinding or in some cases simply just paperwork. I expressed my doubts regarding the so called legacy modules. I pointed out that if these matters are so simple why it has taken them so long to correct them and get these modules to the site. The indication was given that the Consortium needed to put primary focus on getting modules complete and that they would continue to work on getting the Legacy modules complete and ready for assembly at the site. Their assessment is that this can best be accomplished by moving these modules out of Lake Charles, providing the additional space there for a manufacture of other modules need for CA01. The more simple tasks needed for the Legacy modules would be more efficiently done at the site. Kevin and I both stated that this was being done at their direction and their expense and they were to keep them separate and apart from any of the activity currently ongoing at the site.

Since the Consortium (Roderick, Asherman, and Lyash) indicated they believe the project schedule was still very makeable and they were taking the appropriate actions (e.g. procuring other suppliers, reorganizing work flow, correctly network, freezing design changes) to ensure that this schedule was met, I asked the Consortium to provide SCANA and Santee Cooper with a letter detailing just such. I also asked that they provide a detailed schedule that would allow Santee Cooper and SCANA to see weekly the actual module schedules to be delivered in order to meet the schedule they were currently on and how this would ultimately dovetail in to the existing schedule and allow them to get back on schedule. Phil Asherman and Danny Roderick agreed to provide such letter and provide two schedules. The first schedule is a so called level one schedule that would show how the overall project is expected to be met with Summer Units 2 and continue to bring Unit 3 online within in 12 to 15 months of Unit 2. They also agreed to provide a granular schedule which according to them will show daily schedule deliveries for CA01 and CA20. Kevin and I accepted this commitment and encouraged them to get it to us right away. Danny Roderick indicated that the schedule would be forthcoming but certainly within a week.

Shiga reported that Toshiba has been providing and continues to provide some oversight to Westinghouse and CB&I in the way of expertise, scheduling and sequencing. They are also

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 27 of 29

providing additional help for the nuclear island and turbine building. He indicated that Toshiba understands their liability to SCANA and Santee Cooper. Also, Toshiba is providing engineering and support to ensure that the project stays on schedule. He also indicated that Toshiba will be bidding as a third party on the additional module manufacturing capability.

I reminded the group that these developments while sounding positive quite frankly were as we pointed out at the beginning of the meeting not considered reliable. They had not met prior schedules. However, I was willing to accept them as information and proceed as they indicated. We expected to receive the letter including both the level one and granular schedule right away as we would be in the financial market right away. I also encouraged them (Kevin supported) to communicate directly with Kevin and I if they were unable to meet any of the schedules that they have provided regardless of the reason. Both Asherman and Roderick agreed that such communication should take place and this might have alleviated some of the concern expressed by us today. I provided them with my business card which contains all of my contact information including my mobile phone and encouraged them to contact us. They indicated they had the same information for Kevin. That way they would know first-hand from them what their organizations were completing.

Kevin asked the Consortium to review the cash flow projections for the project and to revise the projections as warranted. He noted that the current projections did not reflect the December 2017 schedule. This was an issue with South Carolina Public Service Commission. The Consortium agreed to review and revise as necessary. No time frame was given to complete this task.

Kevin went on to express concern regarding the management capabilities in that at Lake Charles. He indicated that their assessment was that the person managing that facility needed to have prior nuclear experience, particularly nuclear certification type experience.

Everyone, except for the CEO's from the five companies were excused and left the room. Asherman, Shiga, Roderick, Marsh and I remained in the room for a private conversation. CB&I indicated plans to replace the management at the Lake Charles facility with someone who has nuclear certification experience. They pointed out that their reason for hiring Jeff Lyash, a former Progress Energy employee, was for the purpose of adding nuclear experience to their management team. They also indicated that Lee Presley will be on site at Jenkinsville and has nuclear experience. CB&I will look for additional talent. This is a result of Bill Fox's recent resignation. During the private meeting of just the CEO's both Kevin and I reiterated very forcefully our concern regarding their ability to meet the schedule and expressed our insistence that they take whatever steps are necessary to develop the modules and to keep the project on schedule and within the approved budget. They all agreed that this was paramount. They understood the seriousness of not meeting the schedule better and that they would take whatever steps were necessary to get back on schedule. They believe that they are taking such actions. They also understand that we will be watching carefully and that if necessary we will take whatever measures available to us to protect our organizations and our stakeholders. The parties agreed that we would meet more frequently, either in person or by phone and that such

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 28 of 29

meetings would be taking place monthly. Danny Roderick took the assignment to set up the next meeting, which the parties agreed would be sometime between October 25th and the end of October. This timing was picked because all of the submodules necessary for CA20 were committed by this time.

As I indicated to the attendees, I remain skeptical as to whether the information provided by the Consortium can be relied upon. We made clear, Kevin and I, that we would monitor their progress weekly and would take whatever actions were necessary to protect our organizations and our customers.

As the meeting was wrapping up, Phil Asherman handed out the attached presentation titled "SCANA Executive Briefing Lake Charles Modules 18 September 2013". There was no discussion of this material.

If you have any questions or need clarification on any of the points above, please let me know.

LNC:alh

Attachment

cc: Richard Lorenzo

ELECTRONICALLY FILED - 2018 September 24 7:35 PM - SCPSC - Docket # 2017-305-E - Page 29 of 29